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Rev. 0

Proposed Plan for An Amendment to the Environmental Restoration Disposal Facility Record of Decision for Leachate Delisting

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Department of Energy

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PROPOSED PLAN FOR AN AMENDMENT TO THE ENVIRONMENTAL RESTORATION DISPOSAL FACILITY RECORD OF DECISION FOR LEACHATE DELISTING

Hanford Site, Richland, Washington

INTRODUCTION

The U.S. Environmental Protection Agency (EPA), the Washington State Department of Ecology (Ecology), and the U.S. Department of Energy (DOE) (Tri-Parties) are proposing an amendment to the *Environmental Restoration Disposal Facility Record of Decision* (ERDF ROD) (Ecology et al. 1995). The EPA is the lead regulatory agency for the ERDF Project. This Proposed Plan describes an element that would increase operational flexibility of ERDF by allowing leachate to be managed as a nonhazardous waste.

On January 20, 1995, the Tri-Parties signed the ERDF ROD to provide waste disposal capacity for cleanup of contaminated areas at the Hanford Site. The ERDF ROD provides the overall plan for construction of the facility and disposal of remediation waste from the Hanford Site.

An Explanation of Significant Difference (ESD) (Ecology et al. 1996) to the ERDF ROD was issued on July 26, 1996, to allow for the disposal of investigation-derived waste (IDW) and other Hanford cleanup wastes. The ESD also authorized the conditional use of ERDF leachate for dust suppression and waste compaction.

An ERDF ROD Amendment was issued on September 30, 1997, to enable expansion of the facility and allow for centralized treatment of certain wastes.

This Proposed Plan identifies an approach for delisting the ERDF leachate to allow for more flexible handling and disposal options, as warranted. A waste is considered listed if the waste is specified in the EPA hazardous waste lists (*Code of Federal Regulations,* 40 CFR Part 261) or in the Washington State Dangerous Waste Regulations (*Washington Administrative Code*, WAC 173-303). The leachate is currently considered a listed hazardous waste because it may have percolated through a small volume of soil disposed to ERDF that carries one or more of these hazardous waste listings. In order to delist the leachate, it must be demonstrated that the concentrations of hazardous contaminants found in the leachate would be protective of human health and the environment, even if not managed under the hazardous waste rules. To date, the sampling data for the leachate indicate that the constituent levels are low and tentatively meet the regulatory criteria for delisting.

Delisting would allow for a more flexible and cost-effective management of leachate without posing a threat to human health or the environment. During the dryer months, leachate has been used for dust control and waste compaction. Excess leachate, however, is generated during high rainfall years, as in 1996 and 1997. Because of the hazardous waste listing, excess leachate is stored and transported by tanker truck to the 200 Area Effluent Treatment Facility (ETF). The ETF is a permitted facility for the treatment of liquid waste contaminated with hazardous or radiological constituents. The specific method of handling required might not be warranted because chemical analysis of the leachate has shown the concentrations of contaminants to be very low. Although the delisting is contingent on continued treatment at the ETF, it would allow for transport of the leachate through a single-walled pipeline. This could reduce the need for extra storage capacity at the ERDF and minimize the need for support from other site services. The delisting will also allow for continued use of the leachate for dust suppression and waste compaction within the ERDF trench.

Although delisting does not apply to radiological constituents, the concentrations have been below levels of concern for protection of human health and the environment. Continued monitoring of the leachate for radiological constituents shall occur to satisfy the ETF acceptance criteria, to ensure continued worker protectiveness, and to ensure protective management. Specific details for management of the leachate are contained within the leachate management plan for the facility. This document is part of the ERDF Operations Plan approved by the EPA. The leachate management plan will be modified to encompass the provisions of the delisting.

The ERDF ROD, ESD, ROD Amendment, supporting documents and information, and associated public comments can be found in the Administrative Records (see box on page 6).

PUBLIC PARTICIPATION ACTIVITIES

The public is invited to comment on this proposal during the public comment period held from **November 2, 1998 to December 2, 1998.** This proposed amendment was discussed with the Hanford Advisory Board, Environmental Restoration Committee, at meetings in October 1998. A public meeting will be held if a request is received by EPA before November 9, 1998. After considering all comments, EPA may either issue the proposed amendment, issue an amendment modified by public comments received, or retain only the remedy selected in the ERDF ROD and ESD. The decision reached will be announced and will include a summary of responses to comments submitted by the public. All written comments, submitted to EPA, will be placed in the Administrative Record for ERDF.

Comments may be sent to:

U.S. Environmental Protection Agency
Attention: Ms. Pamela Innis
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E-mail: innis.pamela@epamail.epa.gov

BACKGROUND

The fundamental objective of ERDF is to support the timely removal and disposal of contaminants from various locations within the Hanford Site. In accordance with the ERDF ROD, the ERDF is a single, 70-ft-deep trench consisting of two side-by-side cells with final dimensions of 1,420 ft long by 710 ft wide at the top of the trench. The facility is equipped with a double liner and a leachate collection and recovery system in accordance with *the Resource Conservation and Recovery Act* (RCRA). The primary liner system provides for collection and removal of leachate generated during operation and after closure. A secondary liner and leachate collection system retains any leachate that leaks through the primary leachate collection system and allows it to be pumped out. The secondary liner system provides for early detection of leaks from the primary liner and for additional collection of leachate.

Two additional cells will be constructed by the end of 1999. The design of the two new cells also includes a double liner with a leachate collection and recovery system.

The leachate recovery system consists of a sump in each disposal cell, a pump to recover the leachate, and two aboveground storage units to collect the leachate prior to use or treatment. The storage units consist of free-standing steel walls with two flexible-membrane liners and a floating cover. Each unit has a storage capacity of approximately 200,000 gallons (757,000 liters). The amount of leachate generated at ERDF over the limited operational period to date is approximately 2.2 million gallons.

A summary of the remedy chosen in the ERDF ESD for management of leachate is as follows:

- ERDF leachate may be collected and stored at the ERDF for use. Appropriate uses are limited to dust suppression and waste compaction. The leachate must be sampled prior to use to ensure compliance with Land Disposal Restrictions (LDRs), ERDF waste acceptance criteria, and other health-based limits (whichever is more restrictive).

- The ERDF will use the ETF or some other authorized facility for leachate that requires treatment or exceeds annual operation needs.

- The Tri-Parties intend to seek a delisting of the leachate after sufficient data are available to support the determination that this is a nonhazardous waste. Upon delisting of the leachate, the waiver to allow use within the trench as a "listed" hazardous waste will no longer apply because the liquid will be classified as nonhazardous.

To date, analyses of the leachate have shown the contaminants for which testing was done to be below the proposed delisting levels. The leachate must currently be handled as a regulated waste due to prescribed waste designation requirements, which impose physical and administrative limitations on the handling, storage, treatment, and disposal. After delisting, the leachate would be managed in accordance with the requirements specified in the delisting petition, ROD Amendment, and the revised leachate management plan to be approved by EPA. Quarterly testing will be conducted for the first year to ensure that the leachate meets the delisting levels. After that,

periodic testing of the leachate, as prescribed in the petition and the amendment to the ROD, would be performed to confirm that the leachate continues to satisfy the specified delisting levels. Additionally, for the leachate to be recycled in the trench, testing would have to indicate that the contaminant levels satisfy state and federal standards for worker protection, as prescribed in the ERDF health and safety plan.

DESCRIPTION OF PROPOSAL

This Plan proposes a three-step approach to delisting the ERDF leachate. The approach is based on first establishing contaminant concentration levels (i.e., delisting levels) below which the leachate would not be considered to be hazardous. These levels would be based on health-related values that are considered by the EPA and Ecology to be protective of human health and the environment. The delisting levels will be specified in the ROD Amendment. The second step would be to collect and analyze quarterly samples for one year to verify that the leachate satisfies the delisting criteria. The third step of the approach involves ongoing sampling and analysis of the leachate to ensure that the leachate continues to meet the delisting levels that have been established.

The following text describes the proposed leachate management scenarios, the delisting levels, the process used to develop them, and the sampling and analysis that will be conducted to ensure that the delisting levels are met. If the delisting levels are not met, the leachate will be managed as a hazardous waste and treated appropriately. Under either scenario, the leachate would continue to be sent to the ETF to address the potential for radiological contamination. Other options for management of this liquid may be explored in the future. Before other options would be allowed, however, a similar modification to the ERDF ROD would be required, and the public would be invited to comment on the proposal.

The proposed delisting level for a particular constituent contained in the ERDF leachate will be set at the values calculated based on guidance provided by the EPA for delisting evaluations. Constituent concentrations are normally provided in the EPA docket (EPA 1996) to calculate delisting values. The EPA docket is the administrative record that the EPA maintains for rule making. The guidance manual for delisting is found in the docket and includes the list of contaminant concentrations to be used for delisting. EPA Region 10 provided an updated table of docket values to the DOE for the purposes of this delisting. The concentration values are derived from several regulations and guidances, including the *Clean Water Act* and the Superfund Health Evaluation Manual. Constituents not found in the docket will be evaluated to establish risk-based delisting values for that constituent.

The EPA docket values, and other health-based values, would be multiplied by 24 to establish levels for delisting (56 FR 33000). These multipliers represent dilution/attenuation of the constituent contained in the leachate as it moves through a subsurface environment. The "24 times" factor represents the standard used by the EPA when evaluating delisting petitions for waste of 17,000 cubic yards of waste or approximately 3.5 million gallons of leachate per year. The EPA believes that this is a conservative upper bound for volume, not to be exceeded.

Table 1 specifies the numerical values proposed for delisting and compares them to the available analytical results of the leachate sampling.

The proposed sampling plan for the delisting is based on an initial round of quarterly sampling for a period of one year. Samples would be taken with the use of an automatic flow-proportional sampler and grab samples, as appropriate. The leachate would be analyzed for constituents, as specified in the petition. After the first year, semiannual sampling of those constituents detected in the leachate at a level of 12 times the docket value would occur. The 12-times value was selected as a "warning level" that the constituent may be approaching concentrations that would be of concern. The full suite of constituents would be analyzed every two years. If contaminant concentrations occur that are above delisting levels, the leachate would be handled as a hazardous waste.

CERCLA EVALUATION CRITERIA

The *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) provides nine criteria for evaluation of alternatives. The relative benefit of the leachate handling alternative was evaluated with respect to the nine criteria identified in the National Oil and Hazardous Substances Contingency Plan. These criteria fall into three categories: the first two (overall protection of human health and the environment and compliance with applicable or relevant and appropriate requirements [ARARs]) are considered threshold criteria and must be met. The next five items are considered balancing criteria and are used to compare technical and cost aspects of alternatives. The final two criteria (state and community

acceptance) are considered modifying criteria. Modifications to the proposed decisions may be made based on state and public comments and concerns.

SUMMARY OF ALTERNATIVES

Alternative 1 – No Action. The no-action alternative consists of not delisting the ERDF leachate. Leachate would continue to be managed as a hazardous waste.

Alternative 2 – CERCLA Delisting of ERDF Leachate. Delist ERDF leachate under CERCLA to allow more cost-effective and appropriate leachate handling techniques to be implemented.

CERCLA EVALUATION CRITERIA

1. Overall protection of human health and the environment: Alternatives are assessed to determine whether they can adequately protect human health and the environment, in both the short- and long-term, by eliminating, reducing, or controlling exposure. Overall protection of human health and the environment draws on the assessments of other evaluation criteria, especially long-term effectiveness and permanence, short-term effectiveness, and compliance with ARARs.

2. Compliance with applicable or relevant and appropriate requirements (ARARs): This criterion addresses whether a remedy will meet all of the ARARs of other (non-CERCLA) federal and state environmental laws, and/or provides justification for waivers (if necessary).

3. Long-term effectiveness and permanence: Alternatives are assessed for the long-term effectiveness and permanence they provide following implementation, along with the degree of certainty that the alternative will prove successful.

4. Reduction of toxicity, mobility, or volume through treatment: This criterion is evaluated based on the anticipated performance of any treatment technologies that may be employed in a remedy.

5. Short-term effectiveness: The short-term impacts of alternatives shall be assessed considering risks that might be posed to the community during implementation of an alternative, potential impact on workers during remedial action, potential environmental impacts of the remedial action, and time until protection is achieved.

6. Implementability: The ease or difficulty of implementing the alternatives is assessed by considering technical difficulties and unknown factors associated with the construction and operation of a technology, availability of services and materials, and administrative feasibility.

7. Cost: Costs that should be considered include capital costs, operation and maintenance (O&M) costs, and the *net present value* of capital and O&M costs.

8. State acceptance: Based on the state's review of the final remedial investigation/feasibility study report and proposed plan, this criterion is assessed based on whether the state concurs with, opposes, or has no comment on the preferred alternative.

9. Community acceptance: Community acceptance is assessed following a review of the public comments received on the proposed plan.

EVALUATION OF ALTERNATIVES

1. Overall protection of human health and the environment: Both alternatives would satisfy the overall protection of human health and the environment criterion.

2. Compliance with ARARs: The key ARAR for the facility is RCRA - Title 42 USC 6901 et seq., Subtitle C and WAC 173-303. RCRA and WAC 173-303 regulate the generation, transportation, storage, treatment, and disposal of hazardous waste. Both alternatives would comply with ARARs.

3. Long-term effectiveness and permanence: Both alternatives would satisfy this criterion. However, delisting would enable long-term, effective handling of the leachate as a nonhazardous waste stream.

4. Reduction of toxicity, mobility, or volume through treatment: For both alternatives, ERDF leachate would continue to be treated at the ETF to reduce toxicity, mobility, or volume, as necessary.

5. Short-term effectiveness: Delisting would enable effective handling of ERDF leachate in the short term.

6. Implementability: Management of delisted waste in the manner proposed in this Plan is readily implementable.

7. **Cost:** An overall cost savings is likely to be recognized by delisting the leachate waste stream, because it is anticipated that it would not have to be handled and stored as hazardous waste.

8. **State acceptance:** Ecology concurs with the delisting of ERDF leachate.

9. **Community acceptance:** Public acceptability will be evaluated after the closure of the public comment period on this Proposed Plan. Modifications to the proposed alternative may be made based on public comments.

DESCRIPTION OF THE PREFERRED AMENDED REMEDY

This Proposed Plan is being issued by the Tri-Parties and includes elements intended to enhance operational efficiency and reduce costs at ERDF.

The preferred alternative of this Plan would be to establish a list of delisting levels to compare to leachate values. The levels would be values below which the leachate would be considered to be delisted. This leachate shall either be sent to the ETF or recycled in the trench.

The proposed delisting level for a particular constituent contained in the ERDF leachate will be set at the constituent concentrations provided in the EPA docket and derived from regulations and other risk assessments then multiplied by the dilution/attenuation factor of 24.

A Delisting Petition has been prepared by the DOE as part of the supporting documentation for the Amendment. The draft Delisting Petition can be found in the Administrative Record.

Delisting of the ERDF leachate would allow for more flexible leachate management options that are protective of human health and the environment. The public is invited to comment on the proposed modifications to the ERDF ROD.

REFERENCES

DOE-RL, 1998, *Environmental Restoration Disposal Facility Leachate Delisting Petition,* Draft B (DOE/RL-98-47), U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Ecology, EPA, and DOE, 1996, *USDOE Environmental Restoration Disposal Facility, Hanford Site, Benton County, Washington, Explanation of Significant Difference*, Washington State Department of Ecology, U.S. Environmental Protection Agency, U.S. Department of Energy, Richland, Washington.

Ecology, EPA, and DOE, 1995, *USDOE Environmental Restoration Disposal Facility, Hanford Site, Benton County, Washington, Record of Decision*, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Richland, Washington.

EPA, 1996, *Docket Report on Health-Based Levels and Solubilities Used in the Evaluation of Delisting Petitions, Submitted Under 40 CFR 260.20 and 260.22*, U.S. Environmental Protection Agency.

ADMINISTRATIVE RECORD	PUBLIC INFORMATION REPOSITORIES
The public is encouraged to review the documents and all information used for prior decisions at the operating units and ERDF. The Administrative Record file, which contains the information used to select the proposed ERDF design and operating unit remedial actions, is available at the following locations: U.S. Department of Energy, Richland Operations Office Administrative Record Center 2440 Stevens Center Place Richland, Washington 99352 EPA Region 10 Superfund Record Center 1200 Sixth Ave. Park Place Building, 7th Floor Mail Stop: HW-074 Seattle, Washington 98101 Washington Department of Ecology Administrative Record Capital Financial Building, Suite 200 719 Sleater-Kinney Road SE Lacey, Washington 98503-1138	All documents in the regulatory packages are available for review at the Hanford Tri-Party Agreement Public Information Repositories. Gonzaga University Foley Center E. 502 Boone Spokane, Washington (509) 328-4220, ext. 3125 University of Washington Suzzallo Library Government Publications Room Seattle, Washington (206) 543-4664 Portland State University Branford Price Millar Library Science and Engineering Floor SW Harrison and Park Portland, Oregon (503) 724-4729 Washington State University, Tri-Cities U.S. DOE Public Reading Room, Room 101L 100 Sprout Road Richland, Washington (509) 372-7443

Table 1. Environmental Restoration Disposal Facility Leachate Delisting Levels. (5 Sheets)

CAS#	Constituent	Docket Value [a]	Delisting Level [a]	Maximum Concentration Detected in Leachate [a]
100-02-7	4-Nitrophenol	TBD		ND
100-41-4	Ethyl benzene	70000	1680000	ND
100-42-5	Styrene	100	2400	ND
100-51-6	Benzyl alcohol	10000	240000	NA
101-55-3	4-Bromophenylphenyl ether	TBD		ND
1024-57-3	Heptachlor epoxide	0.2	4.8	NA
105-67-9	2,4-Dimethylphenol	700	16800	ND
106-46-7	1,4-Dichlorobenzene	4	96	ND
106-50-3	p-Phenylenediamine	7000	168000	NA
106-93-4	Ethylene dibromide	0.05	1.2	NA
106-99-0	1,3-Butadiene	TBD		NA
107-02-8	Acrolein	700	16800	NA
107-05-1	3-Chloropropene	4	96	NA
107-06-2	1,2-Dichloroethane	5	120	ND
107-13-1	Acrylonitrile	0.2	4.8	NA
108-05-4	Acetic acid vinyl ester	40000	960000	NA
108-10-1	4-Methyl-2-pentanone	2000	48000	ND
108-60-1	Bis(2-Chloroisopropyl) ether	1	24	ND
108-88-3	Toluene	1000	24000	2 J
108-90-7	Chlorobenzene	100	2400	ND
108-95-2	Phenol	20000	480000	ND
109-99-9	Tetrahydrofuran (THF - furan indicator)	TBD		NA
110-75-8	2-Chloroethyl vinyl ether	TBD		NA
110-86-1	Pyridine	40	960	NA
111-44-4	Bis(2-chloroethyl) ether	0.08	1.92	ND
111-91-1	Bis(2-Chloroethoxy)methane	TBD		ND
117-81-7	Bis(2-ethylhexyl) phthalate	6	144	14
117-84-0	Di-n-octylphthalate	700	16800	ND
120-12-7	Anthracene	10000	240000	ND
120-82-1	1,2,4-Trichlorobenzene	70	1680	ND
120-83-2	2,4-Dichlorophenol	100	2400	ND
122-39-4	N,N-Diphenylamine	900	21600	NA
122-66-7	1,2-Diphenylhydrazine	0.1	2.4	NA
123-91-1	1,4-Dioxane	8	192	NA
124-48-1	Dibromochloromethane	1	24	ND
126-68-1	O,O,O-Triethyl phosphorothioate	TBD		NA
126-98-7	2-Methyl-2-propenenitrile	4	96	NA

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CAS#	Constituent	Docket Value [a]	Delisting Level [a]	Maximum Concentration Detected in Leachate [a]
127-18-4	1,1,2,2-Tetrachloroethene	5	120	ND
129-00-0	Pyrene	1000	24000	TIC
131-11-3	Dimethyl phthalate	400000	9600000	ND
131-89-5	2-Cyclohexyl-4,6-dinitrophenol	TBD		NA
1319-77-3	Cresols, total	2000	48000	ND
1330-20-7	Xylene	10000	240000	ND
1336-36-3	Polychlorinated biphenyls (PCBs)	0.5	12	NA
134-32-7	alpha-Naphthylamine	TBD		NA
141-78-6	Acetic acid ethyl ester	30000	720000	NA
14265-44-2	Phosphate	TBD		840
14797-55-8	Nitrate	TBD		19300
14797-65-0	Nitrite	TBD		ND
14808-79-8	Sulfate	TBD		534000
156-59-2	1,2-cis-Dichloroethene	400	9600	NA
156-60-5	1,2-trans-Dichloroethene	700	16800	NA
1634-02-2	Tetrabutylthiuram disulfide	TBD		NA
16887-00-6	Chloride	TBD		443000
16984-48-8	Fluoride	4000	96000	1180
193-39-5	Indeno(1,2,3-cd)pyrene	0.21	5.04	ND
205-99-2	Benzo(b)fluoranthene	0.071	1.704	ND
206-44-0	Fluoranthene	1000	24000	TIC
207-08-9	Benzo(k)fluoranthene	25.2	604.8	ND
218-01-9	Chrysene	2.7	64.8	ND
22781-23-3	Bendiocarb	TBD		ND
24959-67-9	Bromide	TBD		NA
26545-73-3	Dichloropropanol	TBD		NA
309-00-2	Aldrin	0.005	0.12	ND
319-84-6	alpha-BHC	0.01	0.24	NA
319-85-7	beta-BHC	0.05	1.2	NA
50-00-0	Formaldehyde	7000	168000	NA
50-29-3	4,4-DDT	0.3	7.2	ND
50-32-8	Benzo(a)pyrene	0.2	4.8	ND
51-28-5	2,4-Dinitrophenol	70	1680	ND
53-70-3	Dibenz[a,h]anthracene	0.011	0.264	ND
541-73-1	1,3-Dichlorobenzene	1,890	45360	ND
542-75-6	1,3-Dichloropropene	0.5	12	NA
56-23-5	Carbon tetrachloride	5	120	ND

Table 1. Environmental Restoration Disposal Facility Leachate Delisting Levels. (5 Sheets)

CAS#	Constituent	Docket Value [a]	Delisting Level [a]	Maximum Concentration Detected in Leachate [a]
56-55-3	Benzo(a)anthracene	0.077	1.848	ND
57-12-5	Cyanide	200	4800	NA
57-97-6	7,12-Dimethylbenz[a]anthracene	TBD		NA
58-89-9	gamma-BHC (lindane)	0.2	4.8	ND
59-50-7	4-Chloro-3-methylphenol	1260	30240	ND
59-89-2	N-Nitrosomorpholine	TBD		NA
591-08-2	1-Acetyl-2-thiourea	TBD		NA
60-29-7	Ethyl ether	7000	168000	NA
60-57-1	Dieldrin	0.005	0.12	ND
62-50-0	Ethyl methanesulfonate	0.0003	0.0072	NA
62-53-3	Aniline	10	240	NA
62-75-9	N-Nitroso-N,N-dimethylamine	0.002	0.048	NA
621-64-7	N-Nitroso-di-n-propylamine	0.01	0.24	ND
67-56-1	Methyl alcohol	20000	480000	NA
67-64-1	2-Propanone (acetone)	4000	96000	17 J
67-66-3	Chloroform	100	2400	ND
67-72-1	Hexachloroethane	6	144	ND
70-30-4	Hexachlorophene	10	240	NA
71-36-3	n-Butyl alcohol	4000	96000	NA
71-43-2	Benzene	5	120	ND
71-55-6	1,1,1-Trichloroethane	200	4800	ND
72-20-8	Endrin	2	48	ND
72-54-8	4,4-DDD	0.4	9.6	ND
72-55-9	4,4-DDE	0.3	7.2	ND
74-83-9	Bromomethane	50	1200	ND
74-87-3	Chloromethane	33.7	808.8	ND
7429-90-5	Aluminum	TBD		213
7439-92-1	Lead	15	360	ND
7439-95-4	Magnesium	TBD		65300
7439-96-5	Manganese	TBD		17.7
7439-97-6	Mercury	2	48	0.16 J
7440-02-0	Nickel	100	2400	10.2 J
7440-09-7	Potassium	TBD		17000
7440-21-3	Silicon	TBD		NA
7440-22-4	Silver	200	4800	ND
7440-23-5	Sodium	TBD		249000
7440-28-0	Thallium	2	48	ND

Table 1. Environmental Restoration Disposal Facility Leachate Delisting Levels. (5 Sheets)

CAS#	Constituent	Docket Value [a]	Delisting Level [a]	Maximum Concentration Detected in Leachate [a]
7440-31-5	Tin, metal	21000	504000	NA
7440-36-0	Antimony	6	144	ND
7440-38-2	Arsenic	50	1200	32.6
7440-39-3	Barium	2000	48000	63.3 J
7440-41-7	Beryllium	4	96	0.77 J
7440-43-9	Cadmium	5	120	ND
7440-47-3	Chromium	100	2400	13.9
7440-48-4	Cobalt	2100	50400	ND
7440-50-8	Copper	1300	31200	6.4 J
7440-62-2	Vanadium	300	7200	52.9
7440-66-6	Zinc	10000	240000	49.7
7440-70-2	Calcium	TBD		227000
75-00-3	Chloroethane	TBD		ND
75-01-4	1-Chloroethene (vinyl chloride)	2	48	ND
75-05-8	Acetonitrile	200	4800	NA
75-09-2	Dichloromethane (methylene chloride)	5	120	ND
75-15-0	Carbon disulfide	4000	96000	ND
75-25-2	Tribromomethane	100	2400	ND
75-27-4	Bromodichloromethane	1.4	33.6	ND
75-34-3	1,1-Dichloroethane	0.9	21.6	ND
75-35-4	1,1-Dichloroethene	7	168	ND
75-69-4	Trichlorofluoromethane	10000	240000	NA
75-70-7	Trichloromethanethiol	TBD		NA
75-71-8	Dichlorodifluoromethane	7000	168000	NA
76-13-1	1,2,2-Trichlorotrifluoroethane (Freon 113)	1000000	24000000	NA
76-44-8	Heptachlor	0.1	2.4	ND
7664-41-7	Ammonia	TBD		285
7782-49-2	Selenium	50	1200	3.1 J
78-59-1	Isophorone	90	2160	ND
78-83-1	2-Methylpropyl alcohol	10000	240000	NA
78-87-5	1,2-Dichloropropane	5	120	ND
78-93-3	2-Butanone (MEK)	20000	480000	ND
79-00-5	1,1,2-Trichloroethane	5	120	ND
79-01-6	1,1,2-Trichloroethylene	8	192	ND
79-34-5	1,1,2,2-Tetrachloroethane	0.4	9.6	ND
8001-35-2	Toxaphene	3	72	ND
83-32-9	Acenaphthene	2000	48000	ND

Table 1. Environmental Restoration Disposal Facility Leachate Delisting Levels. (5 Sheets)

CAS#	Constituent	Docket Value [a]	Delisting Level [a]	Maximum Concentration Detected in Leachate [a]
84-66-2	Diethyl phthalate	30000	720000	ND
84-74-2	Di-n-butylphthalate	4000	96000	TIC
85-68-7	Butylbenzylphthalate	7000	168000	9 J
86-30-6	N-Nitrosodiphenylamine	20	480	ND
86-73-7	Fluorene	1000	24000	ND
87-68-3	Hexachlorobutadiene	1	24	ND
87-86-5	Pentachlorophenol	0.7	16.8	ND
88-06-2	2,4,6-Trichlorophenol	8	192	ND
91-20-3	Naphthalene	1000	24000	TIC
91-58-7	2-Chloronaphthalene	3000	72000	ND
91-59-8	2-Naphthylamine	0.1	2.4	NA
94-75-7	2,4-D	70	1680	ND
95-50-1	1,2-Dichlorobenzene	600	14400	ND
95-57-8	2-Chlorophenol	200	4800	ND
95-70-5	2,5-Diaminotoluene	96000	2304000	NA
95-95-4	2,4,5-Trichlorophenol	4000	96000	ND
98-82-8	(1-Methylethyl)benzene	1000	24000	NA
98-86-2	Acetophenone	4000	96000	NA
98-95-3	Nitrobenzene	20	480	ND
99-65-0	1,3-Dinitrobenzene	4	96	NA

[a]All results in µg/L except where noted.

CAS# = chemical abstract services number
J = estimated value
NA = not analyzed
ND = not detected
TBD = to be determined
TIC = tentatively identified compound

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